MASCULINE/FEMININE DEVELOPMENT AND PARENT-CHILD ABILITIES TO PERCEIVE ONE ANOTHER'S MASCULINITY AND FEMININITY

BY

ALAN MILLER

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DEDICATED TO

Shelia

Maureen

Leigh Anne

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MASCULINE/FEMININE DEVELOPMENT AND PARENT-CHILD
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MASCULINITY AND FEMININITY

By

Alan Miller

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Major Department: Psychology

Using Spence and Helmreich's Personal Attributes Questionnaire (PAQ), 600 subjects ranging in age from 10 to 72 years rated their perceptions of their masculinity and femininity. Also investigated were the relationships between parent and child perceptions of one another's masculinity and femininity, as well as the relationships between maternal employment status (employed or not employed outside the home) and women's and their children's perceptions of their masculinity and femininity. Using the control theory model of behavior, a coherent picture of masculine and feminine development was constructed. Results indicated a consistency of self perceived masculinity and femininity across the ages studied but differential perceptual abilities of parents. Fathers perceived sons' masculinity/femininity (PAQ scores) better than mothers did, and mothers perceived daughters' PAQ scores better than fathers did. Further, parents perceived their same sex

children's PAQ scores better than these children perceived their same sex parents' scores. Sons and daughters equally perceived their parents' PAQ scores. The children's PAQ scores were not related to maternal employment status, whereas women employed outside the home were more androgynous and instrumental than women not employed outside the home.

CHAPTER ONE

INTRODUCTION

Bem (1981) has argued that one's perception of one's masculinity and femininity acts as a major organizing factor in the individual's subsequent processing of internal and external stimuli. Thus, the study of the developing perception of masculinity and femininity offers an opportunity to investigate a fundamental process, common to all persons. In particular, the investigation of masculine and feminine development across a large age range allows one to look at gender differences that might be due to changing life roles and expectations. Further, an investigation into how children perceive their parents' masculinity and femininity and how the parents perceive their children's masculinity and femininity, may shed some light on the parent-child processes in effect throughout the life span.

There have been numerous studies in the general area of sex role development, but most of these have focused on limited age ranges and have used diverse instruments, making between age comparisons difficult (Emmerich, Goldman, Kirsch, & Sharabay, 1972; Kohlberg, 1966; Marcus & Overton, 1978; Marcus, Crane, Bernstein, & Siladi, 1982; Slaby & Frey, 1975). There have also been a number of studies in the area of the parents' ability to predict children's behavior (Hunt & Paraskevopoulos, 1980; Masters & Wilkinson, 1976; McGillicuddy-DeLisi, 1981; Pressley, Schmierer, & Hope, 1981), as well as children's ratings of parents'

behavior (Armentrout & Burger, 1972; Burger, Lamp, & Rogers, 1974; Schaefer, 1965). However, with the exception of Spence and Helmreich's 1978 study, there have been no studies investigating either children's perceptions of parents' masculinity and femininity, or parents' perceptions of children's masculinity and femininity.

The major purpose of this study was to investigate, using a single instrument across a large age range, individuals' perception of their masculinity and femininity. The second purpose was to investigate, using the same instrument and age range, parents' perceptions of their children's masculinity and femininity, and children's perceptions of their parents' masculinity and femininity. Finally, an attempt was made to determine how well control theory (Carver & Scheier, 1982; Powers, 1973) could be used as a heuristic device with which to organize masculine and feminine development. Control theory, which posits a relationship between perceptual input and the individual's personal evaluation mechanisms, can be used to coalesce such diverse areas as differential socialization of boys and girls, schematic processing of gender related input, and stage theories of masculine and feminine development. (See Appendix B for extended literature review.)

CHAPTER TWO

METHOD

Subjects

The sample (N=600) consisted of 20 males and 20 females in each of the first five age groups, and both parents of these subjects in each of the second five age groups. Mean ages (and standard deviations) for the 10 groups were as follows: for males: group C_1, 10 (0); C_2, 13 (0); C_3, 17 (0); C_4, 21.1 (1.02); C_5, 31.2 (6.7); P_1, 39.3 (6.8); P_2, 42.2 (7.1); P_3, 47.3 (7.2); P_4, 51.4 (4.9); P_5, 60.2 (6.1). For females, the mean ages (and standard deviations) were as follows: group C_1, 10 (0); C_2, 13 (0); C_3, 17 (0); C_4, 20.1 (1.04); C_5, 31.2 (5.8); P_1, 37.1 (6.5); P_2, 41.3 (6.8); P_3, 44.2 (5.4); P_4, 47.3 (5.9); P_5, 58.4 (7.1).

The subjects in age groups C_1, C_2, and C_3 (and their parents groups P_1, P_2, and P_3) were drawn from the fifth, ninth, and twelfth grades of local schools. Group C_4 subjects (and their parents, group P_4) were drawn from an introductory psychology class at a local university. Group C_5 subjects (and their parents, group P_5) were drawn from the parents of children who attended a local pre-school. In order to facilitate comparisons with Spence and Helmreich's 1978 study, only white, intact families were included. Socioeconomic status was not controlled for since Spence and Helmreich (1978) found no effects for this variable.

Instrument

The Short Form of the Personal Attributes Questionnaire (PAQ, Spence, Helmreich, & Stapp, 1974) was used for all subjects (see Appendix A). The Short Form consists of three subscales containing 24 items, presented as 5-point scales. The M scale measures instrumentality, those items which were rated by the standardization sample both as being socially desirable traits and also as associated to a greater degree with male behavior than female behavior (Spence, Helmreich, & Stapp, 1974). The F scale measures expressiveness, those socially desirable items associated more with female behavior than male behavior. Subscale scores, obtained by summing item scores, range from 0-32. Spence and Helmreich (1978) reported correlations of .93 between the Short Form and the long form for both the M and F scales. Cronbach alphas for both the M and F scales are reported as .85 and .82. (See Appendix C for discussion of the PAQ's validity.) Test takers are classified as masculine or feminine if they score above the median on either the M scale or F scale, respectively; as androgynous if they score above the median on both the M and F scales; and as undifferentiated if they score below the median on both scales.

The M-F scale, the third scale of the PAQ, contains a mix of socially undesirable items associated with both male and female behavior. The scale is included in the PAQ because of the results of a factor analysis which indicated the need for its inclusion (Helmreich, Spence, & Wilhelm, 1981). However, since this scale does not contribute to the classification categories outlined above, and since the items on it serve more as filler than substance, the M-F scale will not be included in the analysis below.

Procedure

In each of the groups C_1 through C_4, approximately 75 males and 75 females were contacted. The first 20 parent couples of sons and 20 couples of daughters that responded in each age group composed the sample. Subjects in groups C_1 through C_5 were included only if both parents responded and if the informed consent agreement was signed.

Subjects in groups C_1 through C_4 were administered the PAQ in groups, while subjects in group C_5 completed the PAQ at home. Subjects in the first five age groups filled out the PAQ short form for themselves ("self rating"), as well as for each of their parents ("parent rating"), as they perceived them to be now. All parents (subjects in groups P_1 through P_5) were contacted through the mail and filled out the PAQ self rating and a PAQ rating for their children ("child rating"), as they perceived them to be now.

Data Interpretation

Control theory, an approach to studying and understanding self-regulating systems, was used as a heuristic device to integrate the results (Carver & Scheier, 1982; Powers, 1973). Control theory postulates a homeostatic mechanism whereby individuals compare perceptual input with a hierarchy of reference values they have constructed during development. If the input does not match one of these values, the individual performs some behavior to reduce the discrepancy and continues doing so until the input matches a reference value. Reference value categories, ranging from most abstract to most concrete, are as follows: system concepts, principle, program, relationship, transition, configuration, sensation, and muscle activity. The reference value

chosen by the individual is determined by the way in which the individual categorizes incoming perceptions (Mischel, 1973) and how intensely attention is focused at any particular level. Thus, more effort is required to attend to reference values at the abstract end of the hierarchy than at the concrete levels. Further, the ability to focus one's attention at the abstract level may depend more on structural change (Flavell, 1977) than on simple intent.

CHAPTER THREE

RESULTS

Table 1 contains the means, standard deviations, and medians for responses to the self rating PAQ.

Age Comparisons

Separate 2(sex) x 10(age) ANOVA's were computed for each of the scales. The minimum level of significance was taken as $p < .05$. For the M scale, significant main effects were found for sex ($F[1,580] = 125.74$, $p < .0001$), but not for age ($F[9,580] = 1.42$). Interaction effects were also found ($F[9,580] = 2.51$, $p < .008$). Bonferroni follow-up tests indicated significantly higher scores for males than females at each age group.

For the F scale, significant main effects were found for sex ($F[1,580] = 72.15$, $p < .0001$), but not for age ($F[9,580] = 1.93$). Interaction effects were also found ($F[9,580] = 2.15$, $p < .02$). Bonferroni follow-up tests indicated significantly higher scores for females than males at each age group.

Overview of Results Based on Median Splits

Table 2 contains the percentages of subjects in each of the four categories based on median split values calculated from this sample's college aged group (C_4).

Table 1

Means, Standard Deviations, and Medians for PAQ Self Rating Responses

		Age Group									
		C_1	C_2	C_3	C_4	C_5	P_1	P_2	P_3	P_4	P_5
M Scale											
Males:	$\bar{X}$	23.4	25.1	25.9	24.6	24.8	24.2	25.8	24.8	23.4	25.6
	S.D.	3.6	3.4	2.6	2.7	4.1	3.4	2.9	3.2	4.9	3.8
	Md.	23	26	26	25	24	24	26	24	25	26
Females:	$\bar{X}$	19.9	18.8	22.1	21.3	21.4	21.2	20.5	21.6	19.9	19.4
	S.D.	5.1	2.8	3.1	4.9	4.1	4.3	3.7	2.5	3.6	4.5
	Md.	20	18	22	22	20	21	20	21	22	19
F Scale											
Males:	$\bar{X}$	20.1	20.8	22.1	22.2	22.4	21.5	22.8	20.9	20.5	21.6
	S.D.	3.3	3.1	2.7	4.8	3.0	3.0	3.0	2.9	5.9	3.7
	Md.	20	21	22	23	22	21	22	21	21	21
Females:	$\bar{X}$	23.7	24.8	25.8	26.4	26.8	25.5	26.2	27.1	24.7	24.8
	S.D.	4.2	3.0	2.8	4.3	3.4	3.8	3.2	2.8	5.4	3.2
	Md.	24	25	25	26	25	26	26	27	25	25

Table 2

Percentages of Subjects in Each of the Four PAQ Categories Based on Median Split Values of M=23, F=24

Age Group:		Classification			
		Masculine	Feminine	Androgynous	Undifferentiated
C_1	Male	35	5	25	35
	Female	0	35	40	25
C_2	Male	50	15	20	15
	Female	0	55	20	25
C_3	Male	50	0	35	15
	Female	10	30	45	15
C_4	Male	40	10	35	15
	Female	20	40	30	10
C_5	Male	50	5	25	20
	Female	0	45	45	10
P_1	Male	40	7	23	30
	Female	0	25	40	30
P_2	Male	42	5	38	15
	Female	5	50	28	17

Continued

Table 2

Continued

Age Group:		Classification			
		Masculine	Feminine	Androgynous	Undifferentiated
P_3	Male	57	0	20	23
	Female	0	47	43	10
P_4	Male	33	10	30	27
	Female	7	25	38	30
P_5	Male	60	0	25	15
	Female	0	55	28	17
Total					
	Male	46	6	26	22
	Female	3	46	31	20

An overall chi square test of independence found a significant relationship between age and classification category for males, $X^2(27) = 48.2$, $p<.01$, and females, $X^2(27) = 75.2$, $p<.001$. However, chi square follow-up tests ($p = .001$ for individual tests in order to control for alpha) indicated no significant differences within any category across the age groups, for either males or females. This analysis supported the conclusions reached as a result of the ANOVA reported above, indicating a gender consistency of masculinity, femininity, and androgyny across ages.

Correlations Between Parent and Child Ratings

Parents' Child Ratings and Children's Self Ratings

Table 3 contains the correlations for this analysis. In the four types of parent/child comparisons, the number of significant correlations, out of 10 possible, (and the median correlations) were as follows: father/son, 7 (.43); father/daughter, 4 (.17); mother/son, 3 (.10); mother/daughter, 6 (.27). This indicated that fathers more accurately perceived their sons' masculinity/femininity (as measured by PAQ scores) than mothers did, that fathers perceived their sons' PAQ scores better than they perceived their daughters' PAQ scores, and that mothers perceived their daughters' PAQ scores better than they perceived their sons' PAQ scores and better than fathers perceived daughters' PAQ scores. Thus, parents best perceived their same sex children's PAQ scores.

Table 3

Correlations Between Parents' Child Ratings and Children's Self Ratings

Age Group	Parents' Child Ratings	Sons' Self Ratings M	Sons' Self Ratings F	Daughters' Self Ratings M	Daughters' Self Ratings F
P_1	Fathers	.43*	.65*	-.33	-.31
	Mothers	.24	.19	.33*	.29*
P_2	Fathers	.38*	.29*	.15	.36*
	Mothers	.01	.52*	.11	.26*
P_3	Fathers	.43*	.53*	-.04	.51*
	Mothers	.37*	.006	-.20	.07
P_4	Fathers	.51*	.06	.59*	.32*
	Mothers	.34*	.06	.56*	.27*
P_5	Fathers	-.22	.17	.09	.19
	Mothers	-.06	-.29	.28*	.12

*$p<.05$

Note, for df=38, $r_{.05}=.26$

Children's Parent Ratings and Parents' Self Ratings

Table 4 contains the correlations for this analysis. In the four types of child/parent comparisons, the number of significant correlations, out of 10 possible, (and the median correlations) were as follows: son/father, 3 (.02); son/mother, 4 (.22); daughter/father, 4 (.12); daughter/mother, 4 (.05). This indicated that sons and daughters equally perceived their mothers' and fathers' PAQ scores. Comparing these results to the parent/child comparisons above, it is evident that parents perceived their same sex children's PAQ scores better than these children perceived their same sex parents' PAQ scores. Further, parents' perceived their opposite sex children's PAQ scores no better than those children perceived their opposite sex parents' PAQ scores.

Relationships Between Maternal Employment Status and PAQ Scores

Relationship with Children's PAQ Scores

In order to determine if there was a relationship between the children's PAQ scores and their mothers' employment status (currently employed or not employed outside the home), 2(sex) x 2(employment status) x 4(age) ANOVA's were computed for both scales (M and F). Table 5 contains the means and standard deviations for this analysis. No significant employment status effects were found.

Relationship with Women's PAQ Scores

In order to determine if there was a relationship between women's employment status and their PAQ scores at any age, 2(employment status)

Table 4

Correlations Between Children's Parent Ratings and Parents' Self Ratings

Age Group	Children's Parent Ratings	Fathers' Self Ratings M	Fathers' Self Ratings F	Mothers' Self Ratings M	Mothers' Self Ratings F
C_1	Sons	.29*	-.23	-.01	.29*
	Daughters	-.19	-.25	.05	.03
C_2	Sons	.35*	-.17	-.05	.31*
	Daughters	.34*	.25	.02	.001
C_3	Sons	-.04	-.22	.65*	.21
	Daughters	.36*	.004	-.04	.38*
C_4	Sons	.38*	.14	.11	.19
	Daughters	.41*	.51*	.35*	.64*
C_5	Sons	-.07	.07	.25	.34*
	Daughters	-.48	-.22	.39*	-.02

* $p<.05$

Note, for df=38, $r_{.05}=.26$

Table 5

PAQ Scores of Children Related to Maternal Employment Outside the Home

M Scale			Age Group C_1	C_2	C_3	C_4
Sons						
	Employed mother:	$\bar{X}$	24.1	24.2	25.7	24.7
		S.D.	3.7	3.5	2.1	2.6
		n	14	12	14	9
	Non-employed mother:	$\bar{X}$	20.7	27	25.3	24.5
		S.D.	2.2	2.8	3.3	2.9
		n	6	8	6	11
Daughters						
	Employed mother:	$\bar{X}$	19.6	18.8	22	22.6
		S.D.	5.4	2.9	2.6	5.7
		n	14	16	13	14
	Non-employed mother:	$\bar{X}$	21	18.5	22.3	22.7
		S.D.	4.5	1.7	4.1	3.8
		n	6	4	7	6

Continued

Table 5

Continued

M Scale		Age Group C_1	C_2	C_3	C_4
Sons					
Employed mother:	$\bar{X}$	21.2	22.1	23.3	22.6
	S.D.	3.7	2.6	3.2	3.2
	n	14	12	14	9
Non-employed mother:	$\bar{X}$	19.5	22.6	23	23.8
	S.D.	2.3	5.1	3.2	5.9
	n	6	8	6	11
Daughters					
Employed mother:	$\bar{X}$	23.9	24.9	25.8	25.6
	S.D.	4.1	2.8	2.4	5.9
	n	14	16	13	14
Non-employed mother:	$\bar{X}$	23.3	24.5	25.7	26.3
	S.D.	4.7	3.7	2.8	4.1
	n	6	4	7	6

x 5(age) ANOVA's were computed for both scales. Table 6 contains the means and standard deviations for this analysis. A main effect of employment status was found on the M scale ($\underline{F}[1,188] = 14.79$, $\underline{p}<.0002$), as well as on the F scale ($\underline{F}[1,188] = 8.57$, $\underline{p}<.0002$), indicating that women employed outside the home scored higher on both scales. The biggest difference contributing to the overall difference was found at group P_1.

A 4-way chi square test of androgyny for women employed outside the home and women not employed outside the home indicated that women employed outside the home rated themselves as more androgynous than women not employed outside the home ($X^2[1] = 7.4$, $\underline{p}<.01$).

Table 6

PAQ Scores of Women Related to Employment Outside the Home

		Age Group				
		P_1	P_2	P_3	P_4	P_5
M Scale						
Employed mother:	$\bar{X}$	22.7	20.5	21.6	21.6	20.7
	S.D.	4.3	2.9	3.3	5.5	4.1
	n	29	26	26	22	21
Non-employed mother:	$\bar{X}$	17.5	20.5	19	21.1	18.3
	S.D.	2.6	4.2	3.7	4.7	4.7
	n	11	14	14	18	19
F Scale						
Employed mother:	$\bar{X}$	26.8	25.8	27.6	26	27.1
	S.D.	3.3	2.8	2.2	5.3	2.9
	n	29	26	26	22	21
Non-employed mother:	$\bar{X}$	22.4	26.1	26.4	24.2	26.6
	S.D.	3.0	3.9	2.5	4.4	3.3
	n	11	14	14	18	19

CHAPTER FOUR

DISCUSSION

The results can be summarized in the following manner: 1) With increasing age, males' masculinity and females' femininity remained consistent, as did androgyny. 2) Fathers perceived sons' PAQ scores better than mothers did, and mothers perceived daughters' PAQ scores better than fathers did. 3) Parents perceived their same sex children's PAQ scores better than these children perceived their same sex parents' PAQ scores. 4) Sons and daughters equally perceived their parents' PAQ scores. 5) There was no relationship between maternal employment status and children's PAQ scores, whereas there was a relationship between maternal employment status and mothers' PAQ scores.

Age Differences

The first question to be addressed is why males score higher on the M scale than females, and why females score higher on the F scale than males. Recall that the M scale consists of socially desirable instrumental items while the F scale consists of socially desirable expressive items. Now consider that the input that males and females receive, beginning in infancy and continuing throughout their lives, leads to the creation of different reference values for each sex. That is, parents differentially socialize their children, emphasizing achievement, competition, independence, and control of affective expression for their

sons, while emphasizing trust, a closer, warmer relationship, and more psychological control for their daughters (Armentrout & Burger, 1972; Block, 1975; 1981). These patterns of differential input to developing children which lead to the construction of differing reference value hierarchies are continued in the larger society and are evident throughout the history of the human race, and in contemporary primitive cultures (Barry, Bacon, & Child, 1957). These pervasive socialization practices that emphasize different behaviors for males and females form the basic raw material that is being perceived by the input function in the control theory model. The question arises as to how these inputs are recognized and organized. That is, before an input can be compared to the reference value, it must be sorted and organized in some way. It is here that research in cognitive psychology can add to the model.

Kohlberg (1966) postulated a cognitive mechanism that helps young children take the input noted above and translate it into a guide for behavior by assimilating new stimuli with established preferences. Children come to value positively those things like themselves ("sex role similarity") which lead girls to model females and boys to model males, because they already have feminine and masculine values, respectively. Further, children create gender schemas emphasizing attention, pattern recognition, and memory processes, in order to deal with differential input (Bem, 1981; Constantinople, 1979; Martin & Halverson, 1981; Pleck, 1975). Girls see the physical attributes that distinguish adult women from men, specifically the ability to bear children. They believe they have these attributes, act in ways consistent with them, and consequently adopt the beliefs and reference values consistent with them. Boys go through a similar process with respect to the male

attributes of strength and size, by acting aggressively and adopting the concomitant reference values (Ullian, 1981).

The control theory model, when applied to masculine and feminine development, can be used to coalesce the above lines of research. As the above evidence suggests, there are many and insistent forces acting on males and females, at all ages, to produce differential reference values with which input is compared. Considering this evidence in total, it should come as no surprise that males score higher on the instrumental, independent oriented M scale, while females score higher on the expressive oriented F scale.

If one considers previous research and the present results only with respect to younger subjects there would be little controversy as to masculine and feminine development. However, it is from adulthood that the results from this study do not support the theories arguing that masculinity and femininity continue to increase with age for females and males, respectively (Gutmann, 1977; Neugarten, 1977; Sinnott, 1977). What would account for the finding in this study that males' and females' masculinity and femininity do not increase? In considering the evidence cited above as to the differential inputs males and females receive, input that emphasizes the instrumental traits of males and the expressive traits of females, it is apparent that there is a message from this input that has an overwhelming impact: males are characterized by instrumental behaviors more than females are, and females are characterized by expressive behaviors more than males are. This message is so salient and imbedded so deeply into males' and females' hierarchies of reference values that external forces, including aging, cannot alter it. From control theory one can argue that this message

enters the individuals' hierarchy of reference values, possibly, when compared to non-gender-related information, in a privileged manner. By gender input being privileged Bem (1981) means that "sex has evolved to be a basic category of perception for our species and that the gender schema has a biologically based priority over many other schemata" (p. 365). The message is processed through schematic structures to provide a homeostatic anchor for future development. As Kagan and Moss (1962) found, those behaviors that show continuity from childhood to adulthood are those that are consistent with society's sex role prescriptions. Thus, the gender schema may have privileged access to the hierarchial system of reference values and a privileged access rate when comparing input.

Once the hierarchical values are established, according to the model, only two forces can alter them, a perceptual input or a disturbance, defined as a force acting separately from the system's own actions. Katz (1979) has constructed a model of the possible inputs males and females may be expected to face as they age. Upon the occurrence of each of these, the main societal and peer forces seem to be reinforcing the instrumental-expressive distinction. For example, marriage and childbirth, even in the case of employed mothers, still seem to highlight a differentiation of characteristics and duties generally considered masculine and feminine (Rapoport & Rapoport, 1977). Women may be employed but are still expected to maintain the household and care for the child (McBride, 1973), while the husband's job is often seen as the 'real' job in the family. Thus, given the existence of these forces which seem to highlight instrumental and expressive traits of males and females, it would be helpful to identify a developmental

model of masculinity and femininity that can also fit into control theory while accounting for the findings reported here.

Ullian's model (1975) seems to meet both of these criteria. Her model is based on children's thinking about the biological, social, and psychological differences between males and females. Table 7 represents a marriage of Ullian's model and control theory. Ullian's model helps explain why there is no increased androgyny in old age. If an individual believes that conformity to standards is necessary for the maintenance of marriage and the family, then it is likely that that individual will seek out a marriage partner and construct a family life around those standards. Further, the individual will actively reject suggestions which might threaten this arrangement. Thus, it would seem that unless individuals reach an androgynous position prior to marriage, they would be unlikely to develop one within the traditional family/marriage structure. Further, even if a couple had an egalitarian marriage, based on mutual androgyny, it would still be unlikely that one would see an increase in androgyny in that couple because of the natural forces that push males and females toward traditional roles, such as, childbirth.

Parent-Child Perceptions

The finding that fathers perceived their sons' PAQ scores better than mothers, and that mothers perceived their daughters' PAQ scores better than fathers, fits nicely into previous research findings and into the control theory model. Given the differential socialization outlined above, it follows that the fathers' attention would be highly focused on the sons' inputs to them, while the mothers' attention would

Table 7

Summary of Developmental Stages and Control Mechanisms

Developmental Level	Input	Attention Focused	System Value	Potential Disturbance
Biological: defines masculinity and femininity based on biological and physical differences between the sexes.	Boys are rough and strong, independent, have a penis. Girls are 'nice' and 'neat', play with dolls, crayons, and do not have a penis.	Lower levels: Configuration Sensation Intensity	It is morally normative to be 'my' sex. Deviation in roles is immoral.	Divorce of parents Death of a parent Working mother.
Social: defines masculinity and femininity as prescribed roles inherent in a pattern of social roles.	Boys are more independent, achievement oriented, competitive, aggressive, career oriented, punished more. Girls are supervised more, more passive, home oriented, emotional, are punished less and menstruate.	Lower middle: Relationship Sequence	Society prescribes that males and females have different roles, and as I am a member of society, I will adhere to this prescription.	Parents divorce Death of parent Working mother

Continued

Table 7

Continued

Developmental Level	Input	Attention Focused	System Value	Potential Disburbance
Psychological I: masculinity and femininity based on an appropriate psychological identity.	Males work and deal with the outside world. Females stay at home and have and raise children.	Middle: Program Principle	The success of my marriage and family depends on me and my spouse maintaining set, well defined roles.	Divorce Working wife Spouse's death
Psychological II: Masculinity and femininity can exist independently of traditional roles and standards.	Social and familial roles are filled by the person best suited from them, regardless of sex.	Upper: System Program	Men and women are related to based on the moral principles of equality and freedom.	Divorce Spouse's death

Note: Table based on Ullian (1975) and control theory (Carver & Scheier, 1982; Powers, 1973).

be focused on the daughters' inputs (Barry, Bacon, & Child, 1957; Block, VonDerLippe, & Block, 1973; Lynn, 1969; Kagan, 1964). These findings also support an evolutionary theory of developing cultures in that it is adaptive for fathers to attend to sons in order to teach them the skills necessary for the safety, protection, and propagation of the group, while mothers attend to daughters in order to teach them how to care for the group's offspring, feed the group, etc.

In control theory terms, it would appear that parents, early on in their children's lives, get a picture of their children's masculinity and femininity and integrate this into their hierarchy of reference values. Since children do not change radically, as evidenced by the consistent PAQ scores, parents refer to their established reference values and continue, as their children age, to be somewhat accurate in perceiving their children's PAQ scores.

The same reasoning explains why parents perceived their same sex children's PAQ scores better than these children perceived their same sex parents' PAQ scores. That is, parents selectively attend to their same sex children, and since children's PAQ scores do not change radically, and since parents' reference hierarchies are so well established and practiced, it would follow that parents would be relatively more successful in perceiving their same sex children's PAQ scores. However, these children, who have not yet fully developed their cognitive processes (attending to, recognizing, sorting, classifying), nor yet established a fully stable reference hierarchy, and who have not practiced perceiving their parents' personality as long as their parents have practiced, should not be expected to be as accurate at perceiving

their same sex parents' PAQ scores as their parents are at perceiving theirs.

However, the forces in our society acting to differentiate male (instrumental) from female (expressive) are strong, as evidenced by the finding that sons and daughters equally perceived their parents' PAQ scores. Since this message of instrumentality and expressiveness is delivered to children so clearly, and thus early in development enters their reference hierarchies, it follows that children's perceptions of their parents' PAQ scores should not vary by the children's sex. That is, children's perceptions of their parents' PAQ scores should vary due to the child's ability to sort and classify perceptual input. However, since the message is so clear, and perhaps biologically privileged (Bem, 1981), children in this sample equally perceived both mothers' and fathers' PAQ scores, even though the children probably had differing processing abilities.

Relationships Between Maternal Employment Status and PAQ Scores

The finding that maternal employment status was not related to children's PAQ scores is at odds with previous research which indicates positive effects for daughters of employed mothers. That is, one might expect daughters, especially, of employed mothers to perceive their mothers' expression of instrumental traits while successfully competing in the work force, and thus incorporate some of these same traits into their (daughters) personality. If this did occur it should be evidenced in higher M scores for the daughters of mothers employed outside the home, but this was not the case. That is, in the present sample, there was no difference in the daughters' M scores, not because the daughters

of women employed outside the home had depressed M scores, but because the daughters of women not employed outside the home, in comparison with daughters of women employed outside the home, did not have depressed M scores. Thus, it can be argued that both sets of daughters are receiving instrumental input from some source. It seems fair to assume that daughters of mothers who are employed outside the home are receiving instrumental input from their mothers in the manner outlined above. But, daughters of mothers not employed outside the home are also receiving instrumental input from observing their mothers manage the home. Spence and Helmreich (1978) argue that it takes as great a degree of instrumentality to manage a home as it does to manage a job outside the home. Given the vast number of tasks to be done by the mother who must manage a home and family, it is hard to argue against Spence and Helmreich's assertion. Thus, both sets of daughters are able to construct similar reference hierarchies which lead to an equal expression of instrumental traits.

The final points to address are the findings that women employed outside the home had overall higher scores on both the M and F scales, and were self rated as more androgynous than women not employed outside the home. These findings of greater androgyny and greater instrumentality are congruent with previous research indicating beneficial effects of employment for women (Hoffman, 1981). However, the actual differences between the two groups of women were slight suggesting that women who manage homes probably need to develop and use instrumental qualities to as great a degree as women with a career outside the home. These results also fit the results discussed above, in that if there were large differences between the two groups of mothers, then one would

have expected these differences to have been reflected in significant differences between the daughters of these mothers. That this was not the case further supports the argument that both mothers employed and not employed outside the home have an equal need for instrumental traits in conducting their daily lives.

In conclusion, control theory provides a model by which this study's findings can be explained and into which past research and models can be fit. Using control theory, the discussion centered on how males and females come to establish different personality traits (instrumentality, expressiveness) and how these traits remain consistent across large age ranges. Control theory subsumes Ullian's model (1975) of masculine and feminine development. Finally, the sub-topics of parent-child perceptions and the relationships between maternal employment status and women's and their children's PAQ scores were discussed. Although at this point control theory is very general it still serves as a useful heuristic device with which to unify several areas of research pertaining to masculine and feminine development.

APPENDIX A

SHORT FORM PAQ

I really like to do things for other people.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I am very busy and active.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I get very upset and excited when big things go wrong.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I give in to other people easily and let them tell me what to do.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I am very emotional. My feelings get stirred up easily.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I am a very forceful, "take charge" sort of person.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I like to play things safe and not take chances.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I am a very loud person.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

When I'm in a tough spot, I get very bothered and don't know what to do.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I am a very warm, friendly person.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I try to understand how other people are feeling.

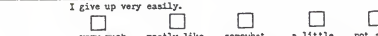
very much like me	mostly like me	somewhat like me	a little like me	not at all like me

I feel sure I can do most of the things I try.

very much like me	mostly like me	somewhat like me	a little like me	not at all like me

When I have to decide about something important, it's hard for me to make up my mind.

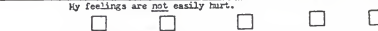
I give up very easily.



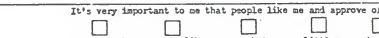
I hardly ever cry.

I don't pay much attention to how other people are feeling.

My feelings are not easily hurt.

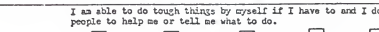


It's very important to me that people like me and approve of the things I do.

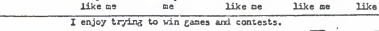


I am better at doing most things than other people.

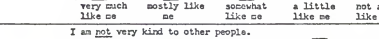
I am able to do tough things by myself if I have to and I don't need other people to help me or tell me what to do.



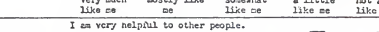
I enjoy trying to win games and contests.



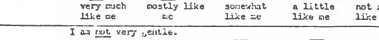
I am not very kind to other people.



I am very helpful to other people.



I am not very gentle.



APPENDIX B

LITERATURE REVIEW

Table 8 contains a summary of the research to be reviewed below.

PAQ vs. BSRI

Since Constantinople's review (1973) it has become accepted that the personality traits of masculinity and femininity are independent constructs, capable of being present simultaneously in any individual. Thus, bipolar measures of masculinity and femininity have become invalidated. Consequently, two instruments have since been developed to measure masculinity and femininity as orthogonal and multi-dimensional traits, the BSRI (Bem, 1974) and the PAQ (Spence, Helmreich, & Stapp, 1974). Since they both claim to measure the same traits, to be independent and factorially pure, and since both instruments have demonstrated correlation with real behavior, the problem was how to decide which instrument would best serve the purpose of this study.

In the first place, this study sought to replicate and extend Spence and Helmreich's 1978 study. Secondly, there were theoretical as well as statistical reasons for preferring the PAQ over the BSRI. Spence and Helmreich (1978) have grounded the development of the PAQ in strong theoretical grounds, whereas Bem can make no such claims about the BSRI. The guiding theory behind the construction of the PAQ is Bakan's conceptualization of agency and communion (1966). Spence and

Table 8

Summary of Studies

Masculine-Feminine Development in Adolescence and Old Age

Study	Age	N	Instrument	Results
Bem (1974)	College	444 males 279 females	BSRI	34% males androgynous 27% females androgynous
Feldman & (1979)	Parents of adolescents, "empty nesters," grandparents of infants	84	Response to a 6-10-month-old baby	Females males, grandparents only for contingent responsiveness to baby; grandparents more responsive than other ages
			Preference to pictures of babies, other-age humans, and objects	Grandparents prefer baby pictures more than other-aged men

Continued

Table 8

Continued

Masculine-Feminine Development in Adolescence and Old Age

Study	Age	N	Instrument	Results
Massad (1981)	14-year-olds	81 males	PAQ, Piers-Harris	For males, masculinity was
		70 females	Children's Self Concept	+ associated with peer and
	17-year-olds	79 males	Scale, Peer Interaction	self acceptance; for
		75 females	Rating Scale	females, androgyny was +
				associated with peer and
				self acceptance
Spence &	High School	374 males	PAQ	25% males androgynous
Helmreich		589 females		35% females androgynous
(1978)	College	586 males		32% males androgynous
		724 females		27% females androgynous

Continued

Table 8

Continued

Masculine-Feminine Development in Adolescence and Old Age

Study	Age	N	Instrument	Results
Spence & Helmreich (1979)	High School	488 males 682 females	PAQ for all	Only the masculine scale for males increased with age
	College	308 males 304 females		
	Parents of 6-7-year-olds	277 males 325 females		
	Parents of college students	736 males 736 females		
Urberg & Labouvie-Vief (1976)	13-year-olds 17-year-olds 39-year-olds	40 males and 40 females at each age	Adjective Check List	No relaxation in sex role stereotyping with age

Continued

Table 8

Continued

Parental Influences on Child's Development

Study	Age	N	Instrument	Results
Baumrind	Parents		PAI, PBR, PSBQ	Authoritative parents had
(1971)	3-4-year-olds	60 girls		androgynous child
		74 boys		
Baumrind	Parents		Interview, PSBQ,	Authoritative parents had
(1975)	3-4-year-olds	110	observation, home visit	androgynous child
Baumrind	Parents	121 mothers	PAI, PBR	Sex typed parents had
(1982)		108 fathers		androgynous child
	9-year-olds	78 girls	PSBQ	
		86 boys		

Continued

Table 8

Continued

Parental Influences on Child's Development

Study	Age	N	Instrument	Results
Block, Block, & Morrison (1981)	Parents 3-7-year-olds	54 girls 46 boys	CRPR California Child Q Sort at 3 and 7-years	Parental agreement of CRPR, r-.6; Parental agreement + related to boys' ego control resiliency, and-- related to girls' ego control
Block, Von-DerLippe, & Block (1973)	30-40-year-olds	66 males 68 females	CPI Fe scale & CPI Socialization scale	Androgynous parents had androgynous child

Continued

Table 8

Continued

Adult/Parental Perceptions of Child's Behavior

Study	Age	N	Instrument	Results
Block (1975)	Mothers	696	CRPR	Close to total agreement between parents and young adults as to differential socialization of boys and girls
	Fathers	548	CRPR	
	Young adults	1227	CRPR	
Hunt & Paraskevopoulos (1980)	Mothers	50	Predicted child's performance on Stanford-Binet, PPVT, and Valentine Test	Poor maternal prediction highly correlated with poor child performance
	4-year-olds	50		

Continued

Table 8

Continued

Adult/Parental Perceptions of Child's Behavior

Study	Age	N	Instrument	Results
Lindholm & Touliatos (1981)	Parents 5-13-year-olds	1008	Behavior Problem Checklist	Mothers fathers perceived psychopathology in child; boys girls perceived to have disorders
Masters & Wilkinson (1976)	Adults 4-year-olds 7-8-year-olds	36 16 16	All rated toys as to stereotype	4-year-olds correlated with two older groups .71 and .77 respectively; 7-8-year-olds correlated with adults .94

Continued

Table 8

Continued

Adult/Parental Perceptions of Child's Behavior

Study	Age	N	Instrument	Results
McGillicuddy-DeLisi (1981)	Families	40 families had one child 3-years; 80 families had three children 3-4-years	Parents interviewed on 12 vignettes and taped re two tasks with child	Mothers' beliefs related to information about own child, fathers' to a system theory
Pressley, Schmierer, & Hope (1981)	19-50-year-olds	142	DIT	Adults overestimated child's level of moral reasoning

Continued

Table 8

Continued

Child Perception of Parental Behavior

Study	Age	N	Instrument	Results
Armentrout & Burger (1972)	grade 4 grade 5 grade 6 grade 7 grade 8	60 males, 65 females 59 males, 70 females 62 males, 65 females 73 males, 64 females 60 males, 57 females	Child Report of Parental Behavior Inventory	Females males re parental acceptance at grades 6 and 8; males females re psychological control by parents; mothers fathers perceived as psychologically controlling
Burger, Lamp, & Rogers (1974)	6-9-year-olds	342	CRPBI	Children perceived decrease in psychological control and acceptance, and increase in parental rule making and limit setting

Helmreich (1978) used Bakan's theoretical speculations to justify creating separate scales that could measure the existence of masculine (agentic) and feminine (communal) traits in any individual. Bakan (1966) argues that agentic traits (independence, goal orientation, self-assertiveness) are more characteristic of males, and communal traits (selflessness, nurturance, expressiveness) are more characteristic of females. He further postulates that the healthiest person combines these two clusters to form an integrated personality. That is, the male mitigates agency with communion, and the female tempers communion with agency. Bakan further theorizes that one of the most maladaptive personalities is the one dominated by agentic characteristics unrelieved by communal traits.

The PAQ has an M scale composed primarily of agentic items, an F scale composed primarily of communal items, and an M-F scale composed of a mix of items, two items prevalent in males but having negative social associations and six items prevalent in females but having negative social associations. The two male items on the M-F scale, aggression and dominance, signify agency unmitigated by communion, while the female items on the M-F scale signify communion untempered by agency. Thus the PAQ has a theoretical underpinning, a claim the BSRI cannot make. In fact, Bem (1974) has not even conceptually distinguished between masculine and feminine sex-role behaviors and masculinity and femininity as personality variables. She calls her instrument a Sex-Role inventory when in fact she actually is measuring personality variables.

The original PAQ (1974) was developed by asking male and female college students to rate the ideal man and woman and the typical man and woman on a large pool of items drawn from Rosenkrantz, Vogel, Bee,

Broverman, and Broverman (1968). Fifty-five items were chosen from this pool based on the criteria that the mean ratings of the typical member of each sex differed significantly for both male and female judges. Further, self ratings of these subjects showed significant differences between men and women, thus validating the questionnaire as a self report measure. In constructing the three scales of the PAQ, Spence, Helmreich amd Stapp (1974) used the ideal ratings of male and female. Items for the M scale (23 of the 55) met two criteria: they were judged as desirable for both sexes and fell towards the independent, masculine end of the rating scale. Items for the F scale (19 of 55) were also judged to be desirable for both sexes but fell towards the feminine end of the rating scale. The final 13 items were rated on opposite ends of the rating scale suggesting a distribution similar to the old bipolar scales. These items were put on an M-F scale in order to maintain the purity of the M and F scales. (Bem constructed only two scales and some of her items would belong better on a third scale such as an M-F scale).

The correlation between items on a particular scale and that scale was higher than the correlation between those items and the other two scales, thus empirically justifying the three scale method. The short form of the PAQ, used in Spence and Helmreich's 1978 study, and used in this study, was created by drawing eight items from each scale based on their part-whole correlations with their respective scales. Correlations between full and short PAQ for a sample of college students was .93, .93, and .91 for the scales M, F, M-F respectively (Spence & Helmreich, 1978). Correlations between the three scales differ slightly by sample, but the same pattern is found in each case: a low, positive correlation between M and F, thus empirically validating a dualistic

approach; a moderately high correlation between M and M-F; a smaller, negative correlation between F and M-F (Spence, Helmreich, & Stapp, 1974). While it may seem awkward to have a third scale of M-F items, it is statistically indicated and also explains the less than perfect correlation between the PAQ and the BSRI, since the BSRI's two scales contain items that really belong on a third scale (Spence & Helmreich, 1981).

Once the PAQ was developed, a highly interesting correlation was noted between the individual items on the M and F scales and the theoretical definitions of instrumentality and expressiveness proposed by Parsons and Bales (1955). They argued that men and women perform distinct and different roles within the family, in that men are instrumental while they work, make contact with the larger world on the family's behalf, and are more independent. Women nurture the family and see to its emotional needs. In the development of the PAQ subjects differentiated the sexes along precisely these lines. Spence and Helmreich contended that this was further validation of their instrument since the independent judgements of their subjects fit Parsons and Bales' theoretical conceptions so closely. Further, the BSRI does not exhibit such a clean match between theory and content. In fact, the BSRI contains some items that are problematical in their inclusion on this type of scale (Pehhazur & Tetenbaum, 1979). Thus, as to the theoretical underpinnings of the two instruments, the PAQ has a coherant theoretical base while the BSRI does not.

Perhaps a more compelling reason to choose the PAQ over the BSRI can be found in the factor structure of the two. Specifically, both instruments claim to consist of orthogonal scales, each scale (Bem's two

scales and Spence and Helmreich's M and F scales) consisting of one factor each. However, factor analysis of the BSRI (Pehhazur & Tetenbaum, 1979) has identified two factors for each scale, while factor analysis of the PAQ (Spence & Helmreich, 1981) has identified one factor per scale. As to orthogonality, the two BSRI scales are slightly negatively correlated (Bem, 1975), while the PAQ scales correlate with one another as noted above. While both scales can claim to be orthogonal, it is more theoretically pleasing, as long as the correlation is not zero, to have a slightly positive value, as does the PAQ.

A larger issue, regarding the use of self report methods needs to be addressed. There is an obvious trade-off between the potential for richer, more meaningful data and the possibility of non-candid responses found in self report measures. Further, one of the most common objectives to the phenomenological approach to the study of behavior is that it cannot be validated (Rychlak, 1981). This objection has become popular, not because it is true, but because so few phenomenological researchers have constructed objective tests of their constructs. Rychlak (1981) cites Piaget and Kelly as two major practitioners of the phenomenological approach who have constructed valid and verifiable tests of their theory. A more recent example of this type of research can be found in Bem and Allen's work on predicting behavior based on self categorizations (1974). In arguing for more awareness of the person variable in personality research they devised a method of simply asking subjects to describe themselves on a seven-point scale. Bem and Allen then used these self reports to compare the subjects on various tasks. They found that subjects told the truth about themselves in

assessing the degree to which they consistently exhibited certain traits.

In the specific case of the PAQ one need only consider the degree to which special populations have been differentiated by the scales (homosexuals, female athletes, scientists) and to consider the stability of scores across large numbers of normative subjects to realize that this self report instrument is tapping some valid, consistent construct (Spence & Helmreich, 1978). Further, as noted above, the fact that the traits identified by the original sample as masculine and feminine fit precisely into Bakan's, and Parsons and Bales' theoretical frames also lends support to the validity of the PAQ self report.

Developmental Models of Masculinity and Femininity

In order to make sense of developmental data one needs a framework into which to fit the data or at least with which to contrast it in proposing a new model. Spence and Helmreich (1979) report a study of PAQ data on subjects ranging in age from adolescence to middle age in which they found increasing scores on the M scale in older males but no corresponding increase in F scores for females. They hypothesized that middle-class males, as they assume career positions, must use their instrumental abilities regularly if they are to succeed, which results in greater salience of this trait as they age. Conversely, women are not usually placed in positions, even in the job world, that demand high levels of instrumentality, so this trait is not reinforced through the mid-life age span. Further, this study replicated Abrahams' finding as to the direction of change in M scores, although Abrahams found increasing F values with age as well (1978). Spence and Helmreich

speculated that content differences between the BSRI, used by Abrahams, and the PAQ accounted for this (Spence & Helmreich, 1979). Another possibility for the differences may be that neither study had a larger, conceptual framework into which to fit their data. There are several models of masculine and feminine development which can be used to explain such results and go some way towards unifying this whole body of research.

Ullian (1975) adapted Kohlberg's model of moral development to describe the development of the concepts of masculinity and femininity. She posited that individuals progress through three major stages of development: biological, societal, and psychological orientation. She further noted a prescriptive and descriptive dimension to each level. Her data were drawn from clinical interviews and thus her formulation of these stages rests primarily on her interpretation system. Also, there is no room for masculine and feminine development beyond the sixth level, reached in young adulthood, nor is there mention of development into later adulthood. She seems to argue that masculine and feminine development are basically stabilized by young adulthood and remain in this form for the rest of one's life. While this may be true, neither she, nor anyone else, has used her model to directly investigate older subjects.

Similarly, Hefner, Rebecca, and Oleshansky (1975) have proposed a three stage model with the transcendent stage (androgyny) being the endpoint of development. Their postulated stages are as follows: Stage one represents an undifferentiated concept of masculinity and femininity and occurs in early childhood. Stage two is a polarized, oppositional conception of masculinity and femininity. Stage three is the

transcendent stage in which the individual has a dynamic "flexible orientation to life in which assigned gender is irrelevant" (p. 143). Although theydo not point to specific mechanisms of development or influence on masculine and feminine development, Hefner et al. do seem to tacitly assert that masculine and feminine development continue into old age. They argue that stage two characterizes most of society's institutions and individuals, and that it is not the endpoint in development as once maintained by theorists when masculinity and femininity were thought of in bipolar terms. Further, in postulating the need for a third stage of development, Hefner et al. implicitly assume that one can develop in later adult life, although just how this occurs in the aged is left unsaid.

Considering a developmental model of a little more complexity, Block (1973) integrated conceptions of masculinity and femininity into Loevinger's (1970) model of ego development, the androgynous person being the most integrated. Masculine and feminine aspects of the self are integrated to produce an individually defined sex role and an orientation to the world similar to that described by Hefner et al. (1975). Block, like Spence and Helmreich, leaned heavily on Bakan's theorizing about duality and she integrated Bakan's theory into her version of the androgynous person. Thus the integration of agency and communion in the androgynous male produces "self-assertion, self-interest, and self-extension tempered by consideration of mutuality, interdependence and joint welfare" (p. 515). The androgynous female integrates communion with agency by including with her "concern for harmonious functioning of the group and the submersion of self, aspects of agentic self-assertion and self-expression" (p. 515). (It

should be noted that these items are to be found on the M and F scales of the PAQ, and being high on both scales classifies one as androgynous.) In support of her position Block has drawn data from cross cultural studies and a longitudenal study of socialization influences (Block, Von Derlippe, & Block, 1973). However, she has not specifically investigated older adults to determine if her model holds throughout the life span.

Urberg and Labouvie-Vief (1976), in noting the lack of empirical studies concerning masculine and feminine development in later years, carried out a study to test Block's conceptualization. Using subjects ranging in ages from 12- to 74-years (although the adult sample mean age was 39-years) they administered an adjective check list and told the subjects to check those items most descriptive of the ideal male and female. They found that stereotyped responses were most profound on opposite sex ratings and that with increasing age, the stereotyped responses were not relaxes. That is, the older subjects endorsed more socially desirable, stereotyped traits when rating both same and opposite sex targets, than did younger subjects. Thus there is some evidence that androgyny does not continue to develop with increasing age.

A recent development in the literature concerning masculine and feminine development focuses on the investigations of schemas and how they relate to one's acquisition of these traits. Most interestingly, Bem (1981) has seemingly abandoned the concept of androgyny as being insufficiently radical and has instead postulated a gender schema to account for the development of sex typing. The idea of looking at masculine and feminine development from a cognitive point of view has gained rapid acceptance and popularity, possibly due to the plethora of

conflicting accounts of masculine and feminine development arising from previous investigations. Specifically, Constantinople (1979), Markus, Crane, Bernstein, and Siladi (1982), Martin and Halverson (1981), and Pleck (1975) have joined Bem in investigating masculine and feminine development from a schematic processing viewpoint. The research to date has attempted to explain sex role stereotypes, identity, and development in terms of normal cognitive processes. This line of research has focused on the young child's pattern recognition of salient environmental cues that allow her to differentiate male and female traits, behaviors, and other correlates. While this approach is intuitively intriguing and can explain the pervasiveness of stereotypes, even in the face of attempts to 'liberalize' the child's attitudes, the research efforts thus far have not had much to say about schematic processes in old age or adolescence.

The other direction this line of research has taken has been to demonstrate schematic operations in college students by first classifying individuals in one of the four categories of the BSRI, and then comparing memory sets among the subjects (Bem, 1981; Markus et al. 1982). These studies have generally found encouraging evidence that feminine subjects remembered more feminine attributed items, masculine subjects remembered more masculine attributed items, androgynous subjects remembered equal numbers of masculine and feminine attributed items, and undifferentiated subjects showed no schematic pattern. Thus the schema approach seems promising but more attention needs to be directed at the processes in older adults.

To this point in this review it is evident that theories of masculine and feminine development have generally had a lot to say about the

young child and have tended not to extend research into middle and old age. However, there are three theorists who have proposed models of masculine and feminine development in the older adult. Neugarten (1977) argues that older men are more receptive than younger men to their nurturent and sensual promptings (communal traits) while older women, more than younger, are receptive to their aggressive impulses (agentic traits). Gutmann (1977) argues for a similar pattern, claiming that traditional masculine/feminine dichotomies are most rigidly maintained during the active parenting years and loosen with old age. Gutmann hypothesizes that after parenthood each partner relinquishes "those personal qualities that were previously concerned for the self, in exchange for those that were partialled out to the mate" (p. 31). Thus males become more feminine and females more masculine, thus resulting in increased levels of androgyny for both. Two problems with this theory are that unmarried adults can exhibit the above patterns without the postulated loosening of parental roles, and the data collected in support of this theory come from TAT tests without confirmatory results with other instruments.

Sinnott's (1977) role blurring theory holds that the personality undergoes reorganization in later life as the older adult tries to meet biological, cultural, and psychological needs. The central argument is that behavioral flexibility is adaptive and as one lives longer the probability of androgynous attitudes and behavior increases. The problem with this approach is the data collection. The use of TAT tests is problematical (McGee, 1982), and clinical populations are used to propose a theory of normal development. Thus, while the theory is provocative, empirical evidence is skimpy.

Another age span rarely studied as to masculine and feminine development is adolescence. One of the few studies that did investigate masculine and feminine development at this age used the PAQ to measure the relationship between PAQ scores and self and peer acceptance (Massad, 1981). It was found that masculinity among males was associated with self and peer acceptance, while for females, masculinity and femininity were associated with self acceptance, and androgyny scores were associated with peer acceptance. Thus this study pointed out the need to study the sexes separately through adolescence in order to ascertain developmental trends, rather than lumping the sexes together as the stage theorists tend to do.

Socialization Influences on Masculine and Feminine Development

Barry, Bacon, and Child (1957), in their cross-cultural study of 110 cultures found differential socialization practices for boys and girls. Large sex differences in socialization practices were found in cultures that were characterized by placing high value on the superior strength and motor skills requiring strength of the male, and in cultures that were characterized by large family groups with high cooperative interaction. Thus boys were trained towards instrumentality in the former cultures and girls towards nurturence and obedience in the latter. The authors go on to argue that in contemporary society where work is done more by brain than brawn, and where nuclear families are virtually isolated from extra-generational ties, socialization pressures are not as great as in the past or as they are in more primitive cultures. That is, females can be valued in the work force, and

husbands must be able to handle their wife's roles when she is incapacitated or absent.

Parsons and Bales (1955) however, argue for a differentiation of socialization pressures even in the modern nuclear family. They point to the near universal instrumental-expressive role differentiations across cultures and argue that it would be maladaptive to tamper with such evolutionary universals. Simply put, they see the man as the family's link to the outside world and the woman as the stabilizer of the family. Thus children should be differentially treated to ensure the continuation of these adaptive roles. The following identification theorists extended this line of reasoning in more specific terms.

The identification theories include Freudian theory and social learning theory. Each of these posits specific parental influences differentially impinging on the sexes. Freud's theory holds that the boy, through defensive identification, comes to adopt the father's standards and thus defines his masculinity in comparison with his father's. The girl, through anaclitic identification, adopts the mother's values and defines her femininity in comparison with her mother's. However, since the girl does not have as strong a motive for identifying with the mother as the boy has for identifying with the father, the girl will still maintain some identification with her father and his actions will have salience for her feminine development.

Social learning theory (Mischel, 1966) emphasizes the model's (parent's) characteristics in investigating identification. The salient characteristics include nurturence, positive regard towards the child, power over resources, and perception of similarity between parent and child (Bandura, Ross, & Ross, 1963; Kagan, 1964; Lynn, 1969; Mowrer,

1950; Payne & Mussen, 1956; Sears, 1957). As is common in modeling literature, all of the above characteristics have been experimentally manipulated in support of the individual theories. However, naturalistic studies have been rare. Below, Baumrind's study (1975) throws considerable light on which of the above characteristics in which circumstances are most salient for which sex.

Block, Von DerLippe, and Block (1973) extended the identification work with longitudenal studies of sex role patterns and socialization practices. They found definite patterns between the child's type of parents and the degree to which a person was sex typed and socialized. They identified four patterns for each sex: 1) Sex-appropriate socialized persons (high masculine/high socialized and high feminine/high socialized) came from families where both parents were available, physically and psychologically, through adolescence, and where there was a clear role differentiation between parents. That is, fathers were masculine and mothers feminine. These children saw the same sex parent as most salient for identification, and had internalized same sex parental values. 2) Sex inappropriate, low socialized persons (low masculine/high socialized and low feminine/high socialized) came from more androgynous families wherein role differentiation between parents was blurred. Children from this group modeled both parents as they exhibited characteristics of tolerance, competence, sharing of responsibility, and consideration of others. 3) Sex appropriate, unsocialized persons (high masculine/low socialized and high feminine/low socialized) came from families wherein the opposite sex parent was seductive and the same sex parent was neurotic. The children in these families formed their sex role identities by reacting to the opposite sex parent.

4) Sex inappropriate, low socialized (low masculine/low socialized and low feminine/low socialized) came from families that were psychopathological. Same sex parents were uninvolved, while opposite sex parents were conflict inducing and salient. Children in this group developed sex role orientations by imitating the opposite sex parent.

Block et al. (1973) demonstrated with this study that identification theories were too global and that samples need to be stratified in order to fully analyze modeling influences within the family. Given the breakdown of the above four groups, Block et al. concluded that socialization is beneficial for males as it tempers agency with communion and thus promotes androgyny. Women, however, are socialized to be nurturent and submissive without the benefit of the promotion of independence or agency. Thus there are differentiating forces impinging on the sexes and this would indicate that any measure of masculine and feminine development must consider the sexes individually.

In an even greater refinement of identification and modeling theory Baumrind (1975) conducted an extensive study of socialization patterns and effects on children's development. She identified three major dialectical categories of parental behaviors: authoritative vs. restrictive, traditional vs. authoritarian, and harmonious vs. permissive. The authoritative parental type was identified by Spence and Helmreich (1978) as the androgynous couple, this couple type being the most well adjusted and having the highest percentage of sons and daughters who were also androgynous. Baumrind (1982) later criticized this characterization by Spence and Helmreich saying that androgynous couple are not the best parents, but Baumrind's measure of masculinity and femininity was the BSRI so the issue remains unresolved.

Children's Success at Predicting Adult Behavior and Attitudes

This is a relatively new area of investigation, although theoretically there is a continuity of research spanning the life span, beginning with the infant's entrainment (Stern, 1977) and continuing through adulthood as we assign attributions to others (Kelly, 1955). However, in the specific area of the child's ability to predict parental masculinity and femininity the evidence is slim. Up to now research has focused on the child's perception of parental child-rearing behavior (Armentrout & Burger, 1972; Burger, Lamp, & Rogers, 1974; Schaefer, 1965). Most recent work has used the Child Report of Parental Behavior (Schaefer, 1965) and has found three major factors: acceptance vs. rejection, psychological autonomy vs. psychological control, and firm control vs. lax control. With this instrument sex differences have been found, particularly by Armentrout and Burger (1972). Girls reported feeling more parental acceptance than boys, and boys reported more psychological control from parents than girls did. Block (1975), using a similar report of parental behavior, found a high degree of agreement between parental self-report and child report of parental behavior. She found evidence for differential socialization practices for sons and daughters in that sons were encouraged to be self-reliant and agentic, while girls were encouraged to be nurturent, obedient, and responsible. These results correlate highly with Barry, Bacon, and Child's (1957) cross-cultural work which would seem to validate the accuracy of self-report measures such as this.

Spence and Helmreich (1978) included, in their college sample, a comparison between child report of parent PAQ and parent self report PAQ. Although they found no significant differences between these two

sets of scores it is probable that, since the children in this case were adults, that large differences between the sets of scores would have been more surprising than otherwise.

Parental Success at Predicting Child's Behavior and Attitudes

This is a recently growing area of research, with investigation focusing on several content areas. Hunt (1980) found that mothers who were poor at predicting their child's performance on standardized cognitive tests failed to provide as stimulating developmentally enhancing environments as those mothers who more accurately assessed their child's capabilities. McGillicuddy-DeLisi (1981), in investigating parental beliefs about the developmental processes of their children found that there was a complicated relationship between parental behavior and parental beliefs about child development. That is, the mothers' behavior was related to the time spent with the child while the father, with less contact with his child based his behavior more on general beliefs about child behavior.

In other areas concerning parental judgements of children's attitudes, beliefs, and behaviors, Pressley, Schmierer, and Hope (1980) found that college students over estimated 11-, 15-, and 19-year-olds' responses to moral dilemmas. Masters and Wilkinson (1976) compared 4-, 7-, and 8-year-olds' ratings of the sex appropriateness of toys with their parents' ratings. They found that older children were in closer agreement with their parents than the younger children were.

Lindholm and Touliatos (1981) found, in a study of parental perception of child psychological adjustment, that mothers were more accurate than fathers, both parents perceived more problems in boys, and that

there were social class differences. All of these studies indicate the need to consider maternal perceptions separately from paternal perceptions.

Of general concern in this area is the validity of perceptual evidence vs. objective evidence. One has to choose between the intimate knowledge a child has about her parent, and vice versa, and the idiosyncratic biases inherent in such ratings. The question to ask is: Which method gives the more valid information about people: an objective observation by a person whose presence is likely to alter the situation being observed, or the subjective observations of a person so intimately involved in the situation so as to be unable to separate fact from bias? Nardi (1973) has argued for the use of person-perception methods in life span research arguing that it is the perception of age changes that dictate intergenerational interactions, and not necessarily the objective, factual changes.

Effects of Maternal Employment Outside the Home

Hoffman's research has led her to conclude that the effects on children of maternal employment is not as obvious as it might seem (Hoffman, 1980). Specifically, she found that the daughters of employed mothers, compared to the daughters of non-employed mothers, benefited positively in that they admired their mothers more, showed improved academic performance, had higher self-images, and exhibited a generally better social and emotional adjustment. The effects on sons, especially from the middle class, are not as straightforward. While the sons show a better social and personal adjustment in comparison with sons of non-working mothers, there is also the finding that academic performance

either shows no difference or declines. Hoffman argues that this might be due to a too great push towards independence for the sons. That is, the average middle class family stresses independence for boys and dependence for girls, but having an employed mother as well as an employed father would put too much stress for independence on the sons while putting a healthy emphasis on independence for daughters (Hoffman, 1980).

Control Theory

Control theory (Carver & Scheier, 1982; Powers, 1973) posits three basic concepts: 1) negative feedback loop; 2) hierarchical arrangement of the reference value; 3) attentional processes. The feedback loop is represented in Figure 1. The process begins at the input function when a person perceives something in her environment (internal or external). This perception is compared to a reference value called a comparator. If the perception and reference values are identical, then that particular process ends, but if there is a discrepancy between the two, the person performs some behavior, an output, which is aimed at reducing the discrepancy. The behavior impacts on the environment creating a new perception which is again compared with the reference values for further modifications if needed. There are, however, external forces which can affect the process: the origin of the reference values and disturbances.

Disturbances are forces acting separately from the system's own actions. An example of this would be a mother deciding to start to work, and the subsequent adjustment this would force the child to make. The feedback system does not create behavior, rather it perceives a

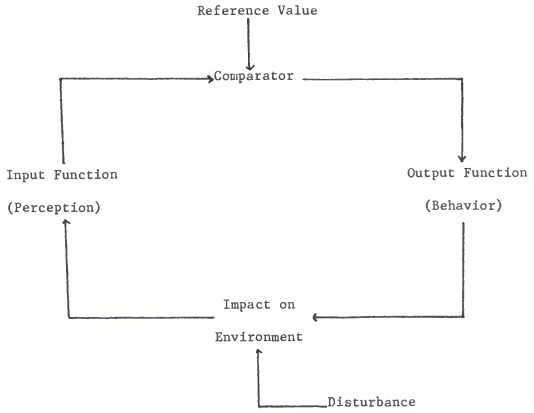


Figure 1: Schematic representation of the control theory model.

situation and works to maintain a homeostatic relationship between the perception and the reference values. Behavior is created by the person in response to internal and external perception.

A crucial aspect of control theory is where the reference values come from. This is especially important in considering masculine and feminine development due to the controversy between biological and socialization causes of male/female behavioral differences. Figure 2 is a schematic presentation of the hierarchical arrangement of reference values. At the bottom of the hierarchy behavior is changed via changes in muscle tension, but as one proceeds up the hierarchy it is apparent that the standards of one level are determined by the behavioral output of the immediately superordinate system. The behavior produces perceptual output which is matched with the reference value from the superordinate level. That is, a man may have a System Concept of being a tough, masculine male, and this would lead to a Principle of never showing emotions.

The System Concept is the point where a person defines herself as being masculine, feminine, or androgynous, with the subordinate levels becoming increasingly concrete, allowing one to compare any level of behavior with any level of reference value. For example, one could use this hierarchy to predict the behavior of a couple engaged in a mating sequence if given a well defined System Concept for each. Thus, a highly masculine male and a highly feminine female would follow certain behavioral patterns quite different from an androgynous couple. In the first case the male would assume the more dominant role, intent more on his own pleasure while the female would be more submissive, seeking to please the male. In the second case, both persons would be concerned

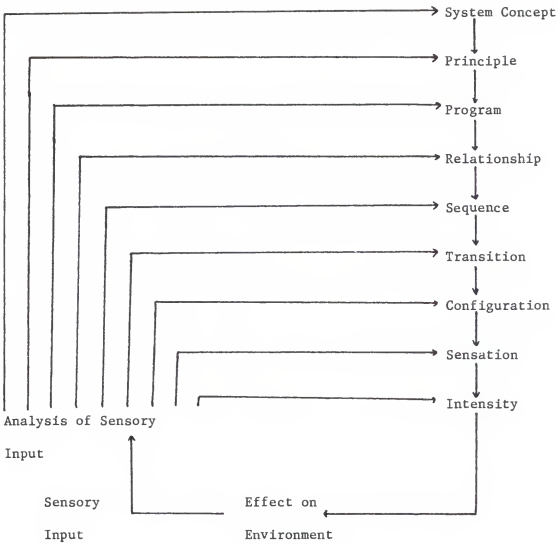


Figure 2: Hierarchy of reference values in the control theory model.

with the other's fulfillment and would adjust behavior, from the Intensity level (muscle tension) up through the Principle level (gentleness and caring in intimate contact).

Finally, control theory posits that a given reference value is called into use by the way in which the person categorizes and processes the incoming perceptions. This process is similar to Mischel's person variables (1973) in which he argues that the individual differentially perceives and understands her environment by how well she organizes information through direct and observational learning, uses encoding strategies and personal constructs, and by her expectations, values, and use of self-regulatory system.

The highest level of control at any given moment depends on the third component of the model, attention. Less direct attention is needed for comparisons made with the lower levels of the hierarchy as much behavior at this level is automatic. At the upper end of the hierarchy one needs to make a concentrated effort to focus attention as unpredictability increases with the higher level comparisons. Attention at a particular level shifts easily to a lower level due to the process that Case calls automaticity (Case, 1978), but shifts to higher levels, especially to Principle or System levels, depend more on structural changes. Thus, if Piaget (Flavell, 1977) is correct and development consists of ever increasingly accurate attempts to understand the world, then as one undergoes structural development, one can attend to larger issues, automatize behavior at the lower levels and attend to System Concepts and Principles. Thus the ubiquity of sex role stereotyping found in children may be due to the child's inability to consider

Principles and System Concepts while she focuses on more immediate stimuli. Stereotyping loosens with development as the individual begins to consider the principles behind the behavior.

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BIOGRAPHICAL SKETCH

Allan Miller was born in Birmingham, Alabama, February 5, 1949, and after spending most of his childhood in Pensacola, Florida, attended Georgia Tech and Emory University, receiving a BA in Secondary English Education. After several years of travel and odd jobs, he went to work for the Eckerd Wilderness Educational System, where he stayed for seven years as a counselor, program director, and system training director. He entered graduate school at the University of Florida in 1980 and received a MED in early childhood education in 1981, and PHD in psychology in 1984. During that time he was the Director of the Bent Twig Pre-School.

He was married to Shelia Flemming on October 23, 1976. On July 19, 1978 they had their first daughter, Maureen, and on January 5, 1980 had their second daughter, Leigh Anne.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Yvonne Brackbill

Yvonne Brackbill, Chairperson
Graduate Research Professor
of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Patricia H. Miller

Pat Miller
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Scott Miller

Scott Miller
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Bill Fromming

Bill Fromming
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Pat Ashton

Pat Ashton
Associate Professor of
Foundations of Education

This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Dean for Graduate Studies and
Research